



DIGITAL RATING PLUG FOR ELECTRONIC TRIP UNIT IN CIRCUIT BREAKERS

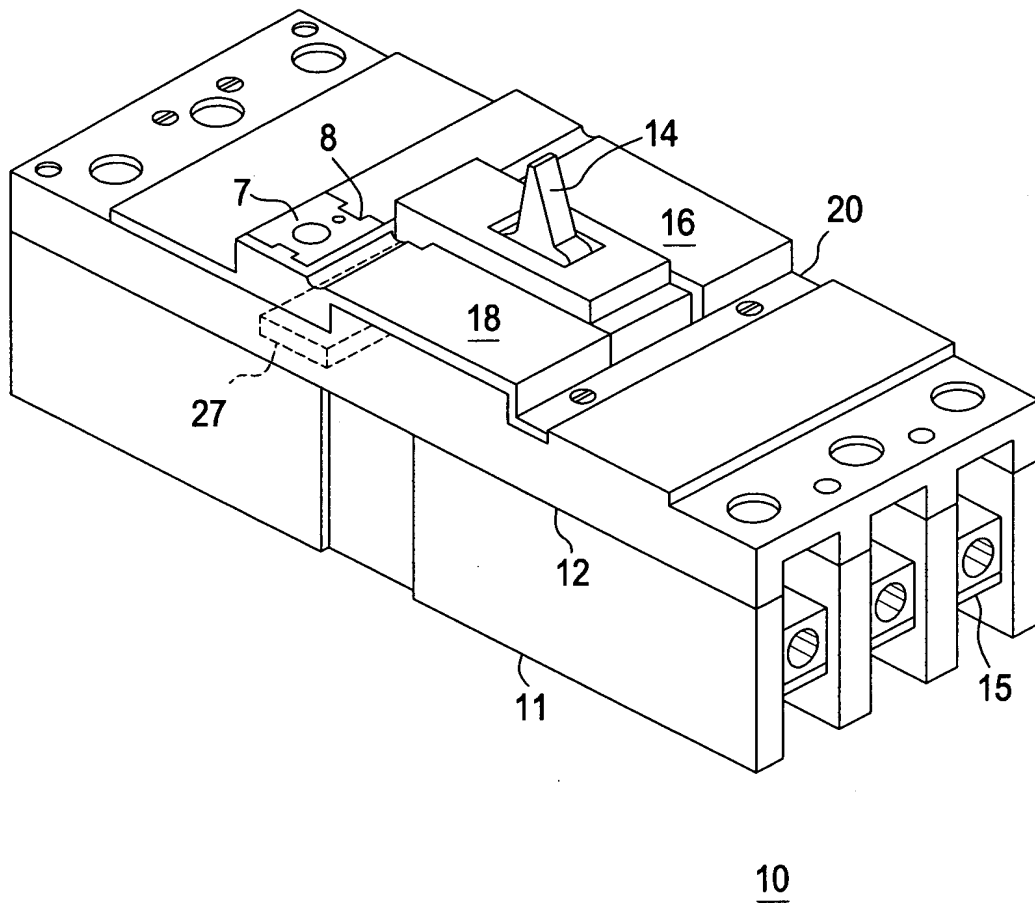
Michael S. Tignor et al.

Serial No. 09/682,997

Docket No. 41PR-7836 (GEN-0286)

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**FIG. 1**  
**PRIOR ART**

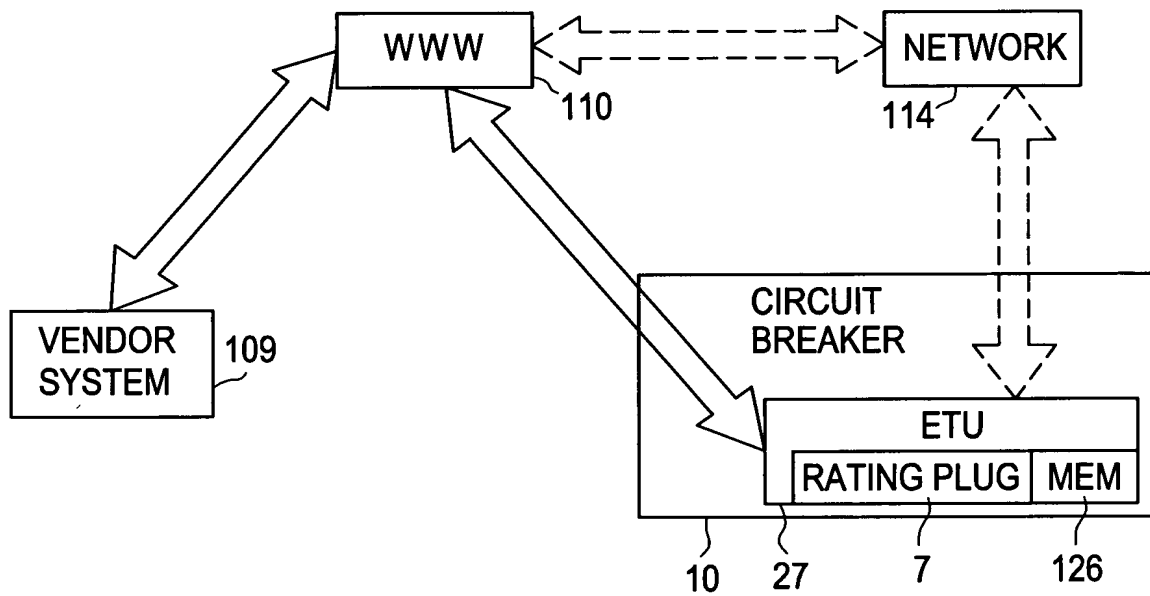




The block diagram illustrates the internal components and connections of the microcomputer-based trip unit 10. A central block labeled "MICROCOMPUTER BASED TRIP UNIT" is connected to a "WWW" (World Wide Web) interface 110 via line 27. It is also connected to a "TRIP MECHANISM" 25 via line 29. The unit receives three phase signals,  $\phi A$ ,  $\phi B$ , and  $\phi C$ , from a set of input lines 13 through a network of switches and relays (15, 17, 19, 21, 23, 24, 49, 51, 53). A power supply section at the bottom includes a transformer 31, a diode 35, a capacitor 37, and a series of resistors (39, 41, 43, 45, 47) connected to ground. These components are linked to an "EEPROM" 55 via lines 61, 62, 63, 64, 65, 66, 67, 68, 69, and 70. The EEPROM 55 is also connected to a "DISPLAY" 112 via lines 100 and 102. The entire system is powered by  $V_{DD}$  and  $V_{SS}$  lines, with control signals CS, SK, DI, and DO. A reference numeral 7 points to the power supply section.



FIG. 3





# DIGITAL RATING PLUG FOR ELECTRONIC TRIP UNIT IN CIRCUIT BREAKERS

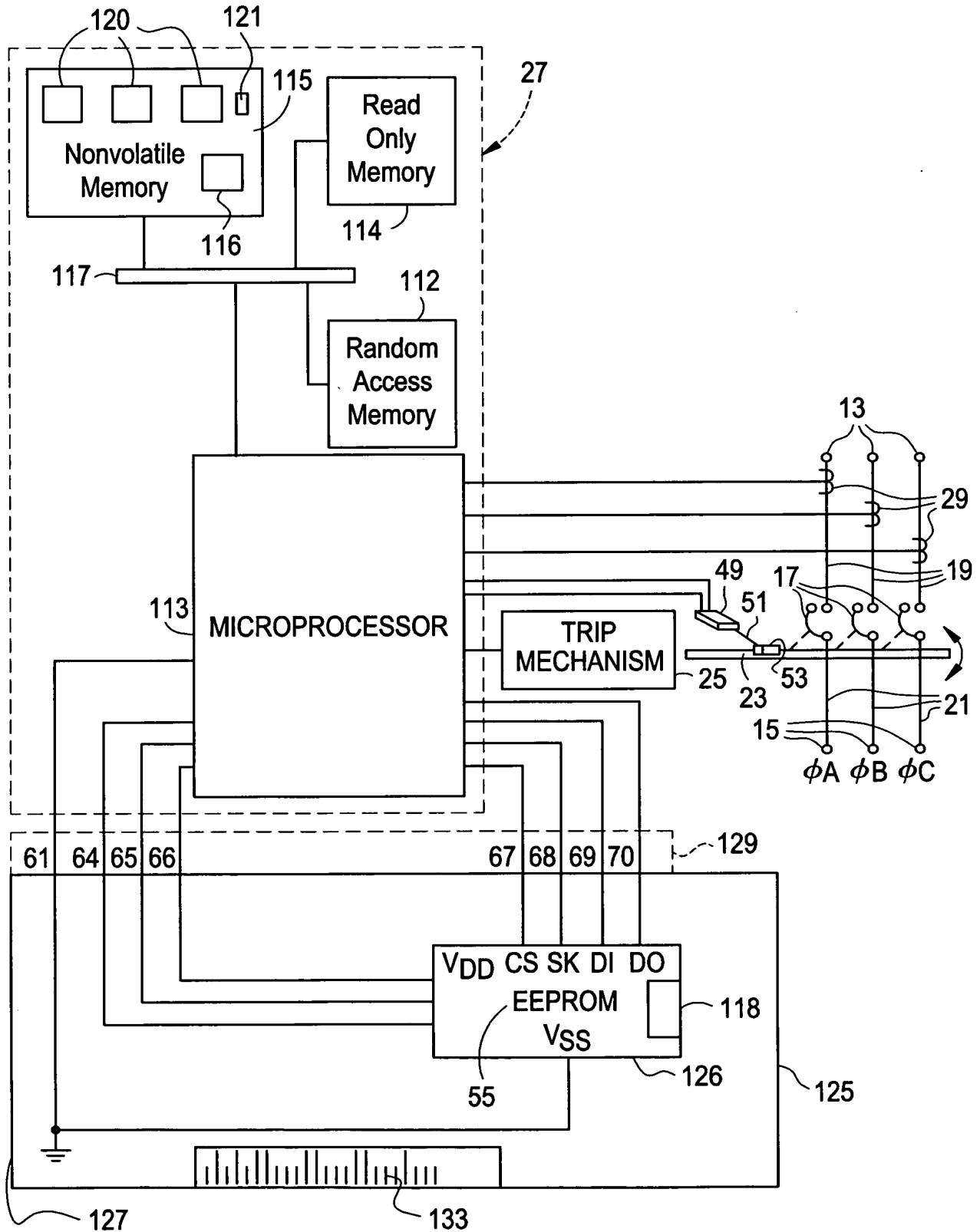
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## FIG. 4





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FIG. 5

